## Primary school year 7 & 8 , vmbo year 1 & 2
Welcome to the Kangaroo, great that you decided to participate!!

✸ You have 75 minutes. There are 30 questions. With every question one of the five options is the correct one. Do what you can, don't be disappointed if you cannot answer everything.

✸ You are not allowed to use a calculator, of course you may use scribbling paper.

✸ Use a pencil to fill in the answer sheet carefully.

✸ About scoring points:
 * You start with 30 free points.
 * Question 1-10: You will get 3 points for a correct answer and lose ¾ points for an incorrect one
 * Question·11-20: You will get 4 points for a correct answer and lose 1 point for an incorrect one
 * Question·21-30:·You will get 5 points for a correct answer and lose·1¼ points for an incorrect o
 * If you don't answer a question, you neither gain nor loose points.

✸ The answers will be from March 25ᵗʰ on the website, www.sci.kun.nl/math/kangoeroe

✸ The scores and the prizes will arrive at the schools in week 18.

Good luck and most of all: Have fun!!

---

1. Which of the following outcomes is the biggest?
   A. $2 \times 0 \times 0 \times 3$ B. $20 \times 0 \times 3$ C. $(2 \times 0) + (0 \times 3)$ D. $2+0+0+3$ E. $(2+0) \times (0+3)$

2. Minoes is going to draw kangaroos. She starts with a blue one; then she makes a green one, a red one, a black one, a blue one, a green one, a red one, a black one and she continues that way systematically. What colour has the 29ᵗʰ kangaroo?
   A. blue   B. green   C. red   D. black   E. you cannot tell

3. Harry has a number of kangaroos. That number is bigger than 2.09, but smaller than 15.35. How many numbers are possible for the number of kangaroos?
   A. 11   B. 12   C. 13   D. 14   E. 15

4. What is the smallest number that is in the table of two and in the table of 3 and in the table of 4?
   A. 1   B. 6   C. 12   D. 24   E. 36

5. Harry wants to write numbers on the places A and B. When he adds all numbers in the ring on the left, the outcome has to be 55. When he adds the numbers in the ring on the right the outcome has to be 55 as well. What number should Harry write instead of B?
   A. 9   B. 10   C. 13   D. 16   E. 17

6. Minoes has nine 100 euro notes, nine 10 euro notes and ten 1 euro coins. How many euros does Minoes have in total?
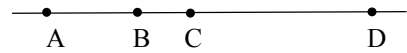   A. 991   B. 1000   C. 9901   D. 9910   E. 99010
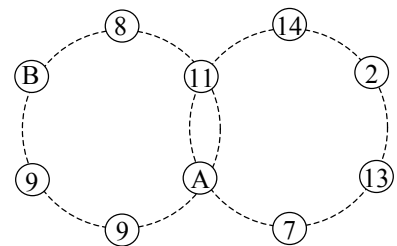
7. Harry chooses two numbers out of the numbers 1, 2, 3, 4 and 5 in every possible way and adds those two. (We mean two different numbers when we say two.) How many different outcomes are possible?
A. 5   B. 6   C. 7   D. 8   E. 9

8. Minoes loves to add the digits that tell the time on her clock. For instance, when her clock indicates 21:17, the outcome is 2 +1+1+7=11. What is the biggest outcome Minoes can get?
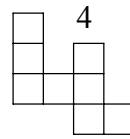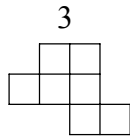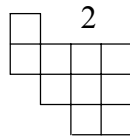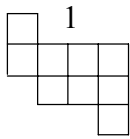A. 12   B. 16   C. 19   D. 23   E. 24

9. Point A and point B are 10 metres apart. Point B and point D are 15 metres apart. Point A and point D are 22 metres apart. How many metres are C and D apart?
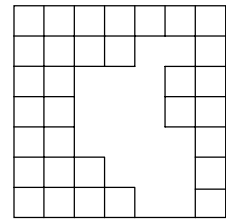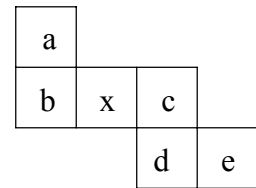A. 1   B. 2   C. 3   D. 4   E. 5

10. The gap in the figure on the right has to be filled. Which two pieces do you need for that? You may turn the pieces over.

A. 1 and 3   B. 1 and 4   C. 2 and 3   D. 2 and 4   E. 3 and 4

11. Harry cuts a cardboard box along its edges and unfolds it in such a way that he gets the diagram on the right. On every side of the box is a letter. When he folds the box again and the letter 'x' is on top of the box, what letter will be on the bottom?
A. a   B. b   C. c   D. d   E. e

12. A big square is divided into four pieces: two squares and two rectangles. The area of two of those pieces is written inside: 25 cm^2 and 10 cm^2. How long is the side of the big square?
A. 5 cm   B. 6 cm   C. 7 cm   D. 8 cm   E. 9 cm
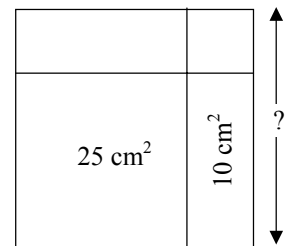
13. What is the outcome of (2003+2003+2003+2003) : (2003+2003)?
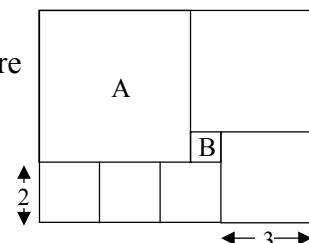A. 2   B. 2,5   C. 3   D. 2003   E. 4006

14. Harry has yellow, green and blue balls. In total he has 20 balls. 17 are not green and 12 are not yellow. How many blue balls does Harry have?
A. 3   B. 4   C. 5   D. 8   E. 9

15. In the diagram you see seven squares. Square A is the biggest and square B is the smallest. How many times does square B fit into square A?
A. 16   B. 25   C. 36   D. 49   E. 64

16. When Harry walked from home to school this morning, he marked some of the trees he passed with a red cross. He marked the first tree, the third one, the fifth one, etc. Walking home after school, Harry again marked some trees with a red cross. This time he marked the first, the fourth, the seventh, etc. How many trees did not get a red cross?
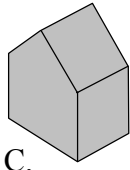A. 4   B. 5   C. 6   D. 7   E. 8

17. Which of the houses below can not be made by Minoes using the net shown on the right? The net can be folded to both sides.
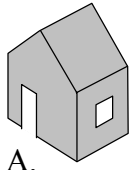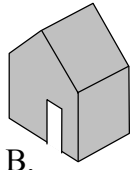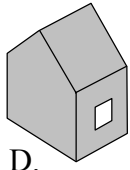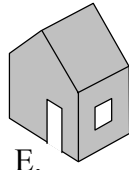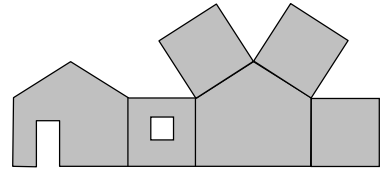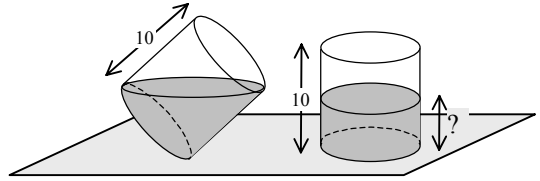

A.   B.   C.   D.   E.

18. A round glass of height 10 cm is partly filled with water. You see the glass in two positions, slant and upright. What is the height of the water when the glass is upright?

A. 3 cm   B. 4 cm   C. 5 cm   D. 6 cm   E. 7 cm

19. The big square consists of a white square surrounded by four identical grey rectangles. The grey rectangles have a perimeter of 40 cm each. How many cm is a side of the big square?

A. 12   B. 14   C. 16   D. 18   E. 20
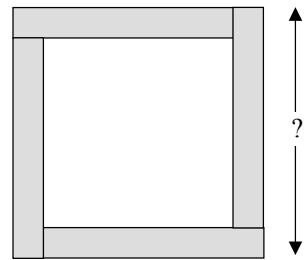
20. Yesterday, on 20-03-2003, Harry looked at his clock at 20:03. Exactly 2003 minutes later he looks at his clock again. What date is it then?

A. 21-03-2003   B. 22-03-2003   C. 23-03-2003   D. 21-04-2003   E. 22-04-2003

21. An ant wants to walk the shortest possible route from A to B using the drawn lines of the cubic box.
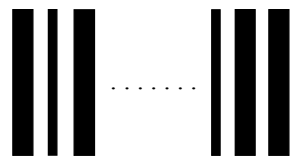How many different routes can the ant choose from?
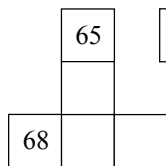
A. 3   B. 4   C. 6   D. 12   E. 16
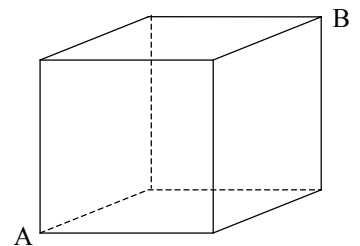
22. A bar code consists of 17 black lines with white lines in between: broad ones and narrow ones. There are 3 more white lines than there are broad black lines. How many narrow black lines are there?
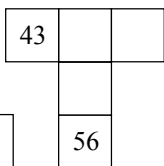
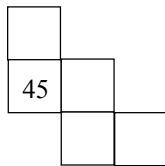A. 1   B. 2   C. 3   D. 4   E. 5

23. Minoes has written the numbers from 0 to 99 on a piece of grid paper measuring 20 by 5. Which of the following pieces cannot be Minoes's?
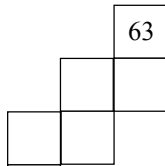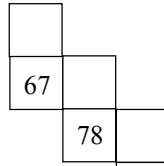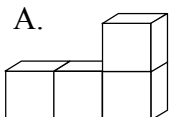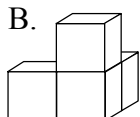

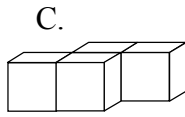| 0	1	10	11	20	
2	3	12	13	22	
4	5	14	15	24	
6	7	16	17	26	
8	9	18	19	28	

A.   B.   C.   D.   E.

24. The puzzle on the right consists of three pieces, each consisting of four cubes. What does the white piece look like?
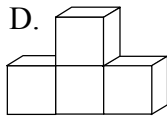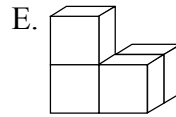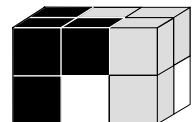

A.   B.   C.   D.   E.

25. Harry has five sticks**.** These are 1 cm, 2 cm, 3 cm, 8 cm and 9 cm long. He makes as many triangles as possible using three of these sticks (by putting the ends together). How many different triangles can he make?

A. 1   B. 2   C. 3   D. 4   E. 5

26. In a reservation there are two sorts of dragons, red ones and green ones. Every red dragon has 3 heads and 2 tails. Every green dragon has 3 heads and 4 tails. All dragons together have 60 heads and 62 tails. How many red dragons live in the reservation?

A. 6   B. 7   C. 8   D. 9   E. 10

27. Point A and point B are 100 cm apart. The "winding line" between A and B consists of alternating pieces of 100 cm and 1 cm. Every next piece forms a right angle with the previous piece. How many cm is the "winding line" long?

A. 909   B. 2500   C. 9900   D. 10100   E. 10200
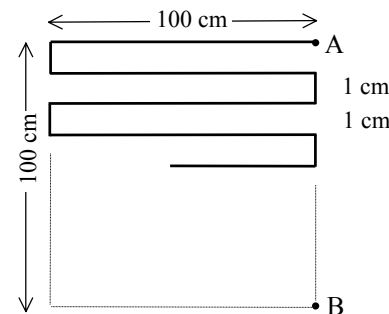
28. In the six ▢ identical numbers are written. In the two △ identical numbers are written as well. And a number is written in the ◯. When you add the three numbers that are there, the outcome is 2003. What is ▢ + ◯?

A. 6   B. 7   C. 8   D. 9   E. 13
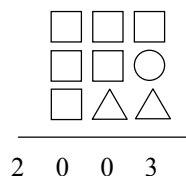
29. The four triangles are half a square each. They all are equally big. How many cm^2 is the area of the four triangles together?

A. 20   B. 25   C. 30   D. 36   E. 45
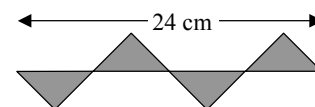
30. Minoes has a box with 9 coloured pencils. There is at least one blue pencil in the box. When Minoes takes 4 coloured pencils, without looking, there are at least 2 pencils of the same colour. When she takes out 5, there are never more than three of the same colour. How many blue pencils are in the box?

A. 1   B. 2   C. 3   D. 4   E. 5